# **ENGINEERING MANAGEMENT SUPPORT INC.**

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April 10, 2014

VIA: Electronic Mail

U.S. Environmental Protection Agency Region VII SUPR/MOKS 11201 Renner Boulevard Lenexa, KS 66219

ATTENTION: Mr. Dan Gravatt

**SUBJECT: Monthly Status Report – March 2014** West Lake Landfill Operable Unit 1, Bridgeton, Missouri

Dear Mr. Gravatt,

On behalf of Cotter Corporation (N.S.L.), Bridgeton Landfill, LLC., Rock Road Industries, Inc., and the United Sates Department of Energy (the "Respondents"), Engineering Management Support Inc. (EMSI) submits the attached status report for the month of March 2014 required by paragraph 56 of the West Lake Landfill Administrative Order on Consent, Docket No. VII-93-F-005. If you have any questions or desire additional information related to this status report or any other aspect of the project, please do not hesitate to contact me.

Sincerely.

ENGINEERING MANAGEMENT SUPPORT, Inc.

Paul V. Rosasco, P.E.

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# Monthly Status Report – March 2014 West Lake Landfill Operable Unit 1 Bridgeton, Missouri

This status report has been prepared by Engineering Management Support Inc. (EMSI) on behalf of Cotter Corporation (N.S.L.), Bridgeton Landfill, LLC (formerly known as Laidlaw Waste Systems [Bridgeton] Inc.), Rock Road Industries, Inc., and the United States Department of Energy (the "Respondents") for Operable Unit - 1 (OU-1) at the West Lake Landfill as required by paragraph 56 of the West Lake Landfill Administrative Order on Consent, Docket No. VII-93-F-005.

# 1. Work Performed During March 2014

### **Project Planning**

A draft of the Core Sampling (Phase 1B, 1C and 2) Work Plan for the isolation barrier investigation was submitted to EPA and MDNR on December 18, 2013. EPA comments on the draft work plan were received on December 26, 2013. The final Phase 1B, 1C and 2 Core Sampling Work Plan was submitted on January 8, 2014.

EPA comments on the various work plans prepared for the additional Supplemental Feasibility Study evaluations were received on August 16, 2013. A meeting was held with EPA and MDNR on September 24, 2013 to discuss comments on the work plans for the additional SFS evaluations. Revisions to the work plans for evaluations of alternative Area 2 depths and volumes, apatite treatment technologies and additional discount rate were prepared and submitted to EPA and MDNR on October 31, 2013. A revised work plan for evaluation of alternative landfill cover designs was submitted to EPA and MDNR on February 21, 2014.

A draft Remedial Design Work Plan was submitted to EPA in November 2008. In accordance with direction from EPA, all work on design of the ROD-selected remedy has been put on hold.

#### Fieldwork - Sample Collection/Analysis

Percussion geoprobe drilling and sampling was performed to collect additional samples from gamma cone penetrometer test locations 1-2, 2-2, 2-3, 1C-2RA, 1C-4R, 1C-6T1, 1C-12, 1C-12C, WL-119, WL-119B, and WL-119C. Soil samples obtained in conjunction with the percussion geoprobe drilling were submitted to Eberline Laboratory for radioisotopic analyses.

## Report Preparation

The monthly progress report for February 2014 was prepared and submitted to EPA and MDNR on March 10, 2014.

During March, work was performed toward preparation of a comprehensive groundwater report.

### **Project Management**

None.

### Meetings

A meeting was held between the OU-1 Respondents and EPA Region VII on March 7, 2014.

A conference call was held with EPA Region VII, EPA Headquarters, U.S. Geological Survey, S.S. Papadopulos & Assoc., Inc, and EMSI on March 27, 2014 to discuss EPA and USGS additional comments on the Fate and Transport Evaluations Work Plan.

### Correspondence

None.

## 2. Analytical Data Collected During This Reporting Period

Laboratory analytical reports for the second set of groundwater samples collected in February 2014 from the four new well clusters (PZ-209, PZ-210, PZ-211 and PZ-212) were received from Test America (TA project nos. J5525, J5548 and J5553) and Eberline (Eberline project nos. 14-02107 and 14-02110).

Analytical reports were also received for samples collected as part of the Isolation Barrier investigations. Specifically, results for the group of soil samples submitted to the analytical laboratory on January 23, 2014 (Eberline no. 14-0113) and the group of samples submitted on February 11, 2014 (Eberline no. 14-02048). The analytical laboratory reports for the first three sets of air monitoring samples were also received during this period (Eberline nos. 12-12061, 14-03008, and 14-03009). Finally, analytical results for investigation-derived water samples were also received (Eberline nos. 13-12044 and 14-03005).

Due to the size of the analytical report files, these reports are being transmitted to the recipients of this monthly report via the WeTransfer file transfer service.

### 3. Work Scheduled to be Performed during April and May 2014

Work will be performed toward preparation of a summary report that presents the data from the four additional groundwater monitoring events (July/August 2012, April 2013, July 2013, and October 2013) and provides interpretation of the results for the four events.

Evaluations to estimate alternative volumes for development of a partial excavation alternative for Area 2 will be conducted.

The two remaining Work Plans for the additional SFS evaluations (Partial Excavation, and Fate and Transport Evaluations) will be updated as necessary to address EPA and MDNR comments and the discussions at the September 24, 2013 meeting, EPA's additional comments on the fate and transport work plan, and EPA direction relative to the partial excavation alternative based on the results of the volume estimates for the alternative partial excavation scenarios currently being developed.

Review and evaluation of the results of Phase 1B, 1C and 2 drilling and sampling and the percussion geoprobe drilling and sampling will be performed during April, 2014.

#### 4. Problems Encountered

Due to elevated thorium activity in four of the samples and elevated uranium in two of the samples in the second group of soil samples collected as part of the isolation barrier investigation, the laboratory reduced the aliquot size for the isotopic uranium and thorium analyses performed on all samples in this work order (Eberline no. 14-02048). Performing analyses of higher activity samples using the standard aliquot would have resulted in non-resolvable spectra and could have resulted in damage to the analytical instrumentation. Use of reduced size aliquots resulted in numerous J (Minimum Detectable Activity > Required Detection Limit) qualifiers. This condition does not constitute a non-conformance to the measurement quality objectives for isotopic uranium. It has been determined that this reduction in aliquot size was undesirable for isotopic uranium and isotopic thorium analyses of the lower activity samples in the work order. The lab is currently reanalyzing the lower activity samples using the standard aliquot. This report will be reissued with appropriate isotopic uranium and isotopic thorium results and qualifiers when these analyses are complete.